

Updated 10/28/04**WAKE FIELD NOTES INDEX**

WF #	Date	Title	Authors
1	04/29/85	Tentative V.W. Experimental Time Table	J. Rosenzweig
2	05/23/85	Spectrometer Design	J. Norem
3	05/23/85	Measurement Facility for New Acceleration Techniques	J. Simpson et al
4	05/28/85	Low Energy Beam Line	J. Norem
5	06/05/85	Comfort	J. Norem
6	06/05/85	The Experimental Program for the RF Cavities	A. G. Ruggiero
7	06/10/85	ANL Wake Field Facility	A. G. Ruggiero
8	06/10/85	Plans for Experiment on Plasma Wave Guide	F. Cole
9	04/85	On the Collinear Wake Field Acceleration	K. Bane, et al
10	07/17/85	A Monte Carlo Calculations of Beam Phase Space Dynamics in the Plasma Wake Field Accelerator	J. Rosenzweig
11	08/13/85	The Effects of Longitudinal and Transverse Driving Bunch Shape on the Plasma Wake Field Accelerator Experiment	J. Rosenzweig
12	08/21/85	DOE Presentation 8/12/85	J. Simpson
13	08/21/85	The Wakeatron: Acceleration of Electrons	A. Ruggiero
14	08/21/85	A Periodic Plasma Waveguide	F. Cole
15	08/21/85	A Better Estimate of Expected Beam Wake Test Sensitivity	J. Simpson
16	08/8/85	Experimental Program to Test the Idea of the Wakeatron with the Electron Beam at Argonne National Laboratory	A. Ruggiero et al
17	08/10/85	A Wakefield Test Facility at Argonne	J. Simpson, et al
18	08/23/85	Pulse Shape Modification in the Advanced Accelerator Facility Beam Line	J. Norem
19	09/10/85	A Vlasov Solver for Wake Field Problems	J. Rosenzweig, R. Sealy
20	10/04/85	Translating the Driver Pulse in the Wake Field Facility	J. Simpson
21	10/29/85	Parameters of Wake Field Beam Lines 10/29/85	J. Norem
22	10/29/85	Beam Lines to Wake Field/CHM Experiments	J. Norem
23	11/7/85	A Simple Model of an Electron Linac Beam as Slow-Wave Structure	F. T. Cole

Updated 10/28/04

WF #	Date	Title	Authors
24	11/7/85	Determination of Beam Chamber Electrical Characteristics from Microwave Measurements	D. Suddeth
25	01/30/86	A Specrometer Design for Wake Field Experiments	J. Rosenzweig, P. Sealy
26	06/9/86	Broad Band power Loss in a Circular Cavity Measured Using a Driven Wire	R. Konecny
27	02/13/86	Beam Measurement of SSC Bollows Independence	P. Schoessow, D. Suddeth
28	01/86	Single Mode Theory for the WAKEATRON	A. Ruggiero
29	02/18/86	Accelerator R & D in ANL HEP Division (Presented at 1/30/86 DOE Review of ANL HEP Division)	J. Simpson
30	02/17/86	Flexible Double Focusing Spectrometer for Wake Field Experiments	J. MacLachlan
31	03/26/86	Parameters of the CHM Isochronous Beam Line	J. Norem
32	06/86	Calculation of Energy Loss and Gain and Transformer Ratios in a Metallic rf Cavities with TBCI	A. G. Ruggiero et al
33	06/19/86	Beam Diagnostics in the Transport Beam Lines	J. Norem
34	07/30/86	Plasma Wake Field Acceleration: Beam Profiles, Radial Focusing and Emittance Matching	J. Norem
35	08/86	Second Set of Calculations of Energy Loss and Gains in a Metallic rf Cavity with TBCI	A. G. Ruggiero P. Schoessow
36	08/86	Calculations of the Mixing Frequency for the WAKEATRON in Linear Approximation	A. G. Ruggiero
37	08/12/86	Linac Emmitance Measurement	P. Schoessow, G. Mavrogenes
38	08/14/86	Nonlinear Plasma Dynamics in the Plasma Wakefield Acceleration	J. Rosenzweig
39	08/13/86	Preliminary Results of the Beamline Magnet Measurements	B. Cole
40	10/86	Excitation of a Pill-Box Cavity Filled with a Medium	A. G. Ruggiero
41	10/27/86	A Proposed Plasma Focusing Experiment	J. Rosenzweig, B. Cole
42	10/86	Third Set of Calculations of Energy Loss and Gain in Metallic RF Cavities with TBCI	A. G. Ruggiero P. Schoessow
43	10/86	The Generalized Deflection Theorem	A. G. Ruggiero
44	11/86	A minor Correction to the Calculation of WF-40 for the Excitation of Pill-Box Cavity	A. G. Ruggiero

Updated 10/28/04

WF #	Date	Title	Authors
45	11/10/86	First and Second Order Beam Optics of the Test Facility and Chemistry Experiment Beamlines	J. Maclachlan,
46	11/86	The Plasma Wake Field Accelerator and Emittance Growth due to Coulomb Scattering	A. G. Ruggiero
47	12/1/86	Deflection Theorem Revisited	J. Rosenzweig,
48	01/26/87	Betatron Oscillations in the Pill Box Cavity (a possible Laser!?)	W. Gai,
49	01/26/87	Transverse Excitation of Pill Box Cavity	W. Gai
50	01/10/87	Trapping of Plasma Electrons in the Plasma Wakefield Accelerator	J. Rosenzweig
51	03/87	Damping Rings for Small Emittance and Short Bunch Electron Beams Short Bunch Electron Beams	A.G. Ruggiero
52	03/24/87	Transverse Focussing using Plasma Wake Fields	D. B. Cline, B. Cole et al
53	06/7/87	Users Guide to Data Acquisition/Control for the ANL Wakefield Facility	P. Schoessow
54	06/22/87	A Proposed Laser for the SLC Plasma Lens	J. Norem
55	07/16/87	The Initial Analysis Energy Loss Measurement of Electron Beam in Plasma	H. Figerow, W. Gai, P. Schoessow , J. Simpson, et al
56	07/20/87	New Image Processing Features	P. Schoessow
57	08/5/87	Theoretical Predictions for Driving Beam Energy loss and Auto-Acceleration in Plasma	J. Rosenzweig
58	08/6/87	How to Operate the Hollow Cathode ARC Plasma Source	J. Rosenzweig
59	09/3/87	Current Status of SLC Plasma Lens R & D	J. Price
60	09/1/87	Conceptual Design of SLC Plasma Lens: An Outline	J. Norem,
61	09/10/87	Control of the Witness Beam Delay	P. Schoessow
62	09/18/87	The Short Focal Length Plasma Lens: How Short is Short?	J. Norem
63	09/25/87	Test of Plasma Lenses with the CHM Linac	J. Norem,
64	10/5/87	Guide to Expected Wake Amplitudes in PWFA Experiments	J. Rosenzweig,
65	10/12/87	Information in Pulse Widths from the September 30, WAKEATRON Test	J. Simpson,
66	10/13/ 87	First Measurement of Wakefield Acceleration in Wakeatron Structure	P. Schoessow

Updated 10/28/04

WF #	Date	Title	Authors
67	10/19/87	Calculation of Compression Limits using a strong, Aberration-Prone Lens	J.B. Rosenzweiz
68	10/20/87	The Aperture Limit in Section 3	W. Gai
69	10/27/87	A Plasma Source for Lens Experiments	J. Norem
70		Plasma Lens-Thick or Thin?	J. B. Rosenzweig
71	11/30/87	Pulse Length Measurement System	H. Figueira
72	12/15/87	Preliminary Analysis of First Plasma Wakefield Tests	P. Schoessow, J. B. Rosenzweig
73	12/18/87	Trapping, Thermal Effects, and Wave Breaking in the Nonlinear Plasma Wakefield Accelerator	J.B. Rosenzweig
74	01/7/88	High Resolution Beam Profile Measurements in Gasses	J. Norem
75	01/22/88	Two Particles Model in Pill Box Cavity	W. Gai
76	02/9/88	PIC2 and PIC4 – Particle Pushing Simulation Codes for Plasma Lens (not a new lottery)	J. Simpson,
77	02/17/88	The Longitudinal Phase Space Measurement System	B. Cole
78	02/16/88	Direct Measurement of Beam-Induced Fields in Accelerating Structures	H. Figueira, W. Gai, R. Konecny, J. Norem et al
79	03/15/88	Experimental Observation of Plasma Wake-Field Acceleration	J.B. Rosenzweig, D. B. Cline, B. Cole, W. Gai, R. Konecny et al
80	03/22/88	Calculations of Wake Fields in a Dielectric Loaded Wake Field Device	W. Gai
81	05/31/88	Short Gas Pulses from the Piezovalue	J. Norem, R. Konecny, et al
82	05/31/88	Solenoid Focusing for Plasma Lens Tests	J. Norem
83	05/31/88	High Resolution Beam Monitors	J. Norem
84	06/2/88	Maximum Coupling of a Beam Pulse to its Environment	J. Simpson
85	06/30/88	The Underdense Plasma Lens and Bootstrap Disruption	J. Rosenzweig
86	07/7/88	Deposition of Beam Energy in a Metallic Box	S. Mtingwa
87	07/15/88	Summary of the Dielectric Wake Field Experiments	W. Gai, B. Cole, P. Schessow
88	10/11/88	A High Resolution Beam Profile Monitor Using Bremsstrahlung	J. Norem, P. Schessow
89	08/4/88	Experimental Demonstration of Wake-field Effects in Dielectric Structures	W. Gai, P. Schessow, B. Cole R. Konecny, J. Norem et al

Updated 10/28/04

WF #	Date	Title	Authors
90	08/24/88	Longitudinal Space Charge Effects near a Laser Photocathode	J. Rosenzweig
91	11/8/88	Experimental Measurement of Nonlinear Plasma Wake-Fields	J. Rosenzweig P. Schewssow, W. Gai, R. Konecny, J. Norem, B. Cole, J. Simpson
92	09/8/88	Modulation of Continuous Electron Beams in Plasma Wake-Fields	J. Rosenzweig
93	09/20/88	Plasma Wake-Field Amplitudes from Self-Pinched Beams	J. Rosenzweig
94	10/11/88	Final Focus Plasma Lenses in Liner Colliders	J. Rosenzweig
95	11/15/88	High Resolution Beam Profile Monitors for the Final Focus of Linear Colliders	J. Norem
96	11/17/88	Plasma Lens Valve/Nozzle Tests	J. Norem, R. Konecny
97	12/7/88	Instability of Compensated Beam-Beam Collisions	J. Rosenzweig
98	12/19/88	Multi-Fluid Models for Plasma Wake-Field Phenomena	J. Rosenzweig
99	01/5/89	Effective Gradient Enhancement in a Hybrid Wake Field Accelerator	J. Simpson
100	01/6/89	Possible Parameter for the SLAC FFTF beam Monitor (and other issues)	J. Norem
101	01/5/89	Multi-Stage Wake Field Accelerator	W. Gai
102	01/30/89	A Possible High Energy Wake Field System	J. Norem
103	02/13/89	Complete Calculation of Wake Field Effects	W. Gai
104	02/13/89	Instability of Compensated Beam-Beam Collisions	J. Rosenzweig, P. Chen, B. Autin
105	02/15/89	Comments on Transverse Wake-Fields in Waveguides	J. Rosenzweig
106	03/14/89	ARRAKIS-A Code for Nonlinear CWFA Simulations	P. Schoessow
107	03/10/89	A Coaxial Bunch Compressor for a Photocathode Source	C. Ho, J. Norem, P. Schoessow
108	03/27/89	Dielectric Wave Guide	M. Rosing
109	03/30/89	Fields in Dielectric Tubes at b=1	J. Simpson
110	03/14/89	Argonne Plasma Wake-Field Acceleration Experiments	J. Rosenzweig, B. Cole, W. Gai
111	04/24/89	High Power, High Frequency RF Sources	J. Norem
112	05/03/89	Dielectric Loaded Cylindrical Wave guide Accelerator	M. Rosing
113	05/18/89	Recirculating Accelerating Cavities-Maybe?	J. Simpson

Updated 10/28/04

WF #	Date	Title	Authors
114	05/24/89	A Simple Noise Eater for a High Power Laser	J. Norem
115	06/02/89	Scaling of Hybrid Mode Dielectric Transverse Wake Fields	J. Rosenzweig
116	06/02/89	What's a Kilpatrick	M. Rosing
117	06/02/89	Preaccelerator Design #1: Basics	B. Cole
118	06/20/89	Laser Photocathode Tail Problem	M. Rosing
119		***** NOT USED *****	
120		***** NOT USED *****	
121	07/18/89	Experimental Studies of Plasma Wake-Field Acceleration and Focusing	J. Rosenzweig
122	07/27/89	Passive Compensation of Energy Spread in Linac Beams	J. Simpson
123	07/25/89	Corrections of WF-80 and WF-103	W. Gai, M. Rosing
124	08/01/89	The Wake Fields in Dielectric Sturctures	W. Gai
125	08/09/89	Accelerator Design #2: Theoretical Models	B. Cole
126	08/22/89	The Characteristics of the Wakefield Silencer	M. Rosing
127	09/13/89	Transverse Effects in the Argonne Wake Field Accelerator	J. Norem
128	09/20/89	The Nonexistence of Transverse Deflections in Dielectric Wakefield Structures – An “Intuitive” Explanation	J. Norem
129	09/25/89	Numerical Calculation of m=1 Mode Wakefield in a Dielectric Structure as b goes to 1	W. Gai
130	10/13/89	Demonstration of Electron Beam Self-Focusing in Plasma Wakefields	J. Rosenzweig, B. Cole, W. Gai R. Konecny, J. Norem et al.
131	11/01/89	The Complete Proof of Wei Gai’s Theorem	M. Rosing
132	11/29/89	Electric and Magnetic Fields in the Dielectric Wakefield Device	M. Rosing
133	12/14/89	Dielectric Breakdown in Cerenkov Wakefield Accelerators	J. Norem, E. Chojnacki, C. Ho R. Konecny
134	01/03/90	Estimation of the Longitudinal Space Charge Force Near Photocathode	C. Ho
135	01/18/90	Calculation of Longitudinal Amplitudes for the Dielectric Waveguide (b=1)	M. Rosing
136	01/23/90	Non-Axisymmetric RF Mode Suppression in Cerenkov Wakefield Accelerator	E. Chojnacki

Updated 10/28/04**WF # Date Title****Authors**

137	01/25/90	External RF coupling to Dielectric-Lined Waveguide	E. Chojnacki
138	02/05/90	Wakefield Calculations on Parallel Computers	P. Schoessow
139	02/05/90	Nonlinear Plasma and Beam Physics in Plasma Wake Fields	J. Rosenzweig
140	02/05/90	The Cerenkov Lasertron and Other Options; Part 1: Generalities	J. Norem, E. Chojnacki, R. Konecny
141	02/05/90	<i>b</i> Limit of Er and HR Inside Dielectric Loaded Waveguide	M. Rosing
142	11/01/90	Correction and Implements to WF-134 (Estimation of the longitudinal space charge force near photocathodic)	C. Ho
143	04/04/90	Progress Report on AVE (Argonne Wakefield Accelerator) - RF Photo-Cathode Design	C. Ho
144	04/23/90	Passive Momentum Spread Reduction the Wakefield Silencer	M. Rosing, J. Simpson
145	05/11/90	Optimization of Photocavity Parameters for Short Pulse Operation	J. Norem
146	04/04/90	Greens Function Solution to Charge Moving in a Linear Plasma	M. Rosing
147	06/13/90	Modifications to the Simulation Code PAEMELA for the AWA RF Photocathode Design	C. Ho
148	07/16/90	Step-up Transformer Optimization in Wakefield Accelerators	E. Chojnacki, J. Simpson
149	07/30/90	Calculation of Direct Energy Loss Due to the Electron Beam Passing Through a Thin-Lined Dielectric Structure	J. Chie, W. Gai
150	08/02/90	High Frequency Wakes and Super-Conducting Cavities	J. Norem
151	08/09/90	Laser Photocathode Tail Problem Revisited	M. Rosing
152	08/17/90	Heat Polishing and Chemical Etching in the Production of Small Angle Scattering and Optical Surfaces	J. Chin
153	08/28/90	Comparison of PARMELA and TBCI-SF Simulations of the AWA Rf Photocathode Gun	C. Ho, P. Scheosow
154	09/28/90	Beam Lines for the Argonne Wakefield Accelerator	S. Mttingwa (Reserved)
155	10/19/90	Modelling of the Transverse Modes Suppressed in the Dielectric Wakefield Accelerator	W. Gai, C. Ho
156	11/15/90	Direct Acceleration of Charged Particles Via a Laser Beam Through a Dielectric Lined Structure	W. Gai
157	11/20/90	Simulation of Single Bunch BBU in a Cherenkov Wake Tube	J. Simpson
158	1/15/91	Bremsshlung Radiation Electrobeam Monitoring Systems (BREMS)	J. Norem

Updated 10/28/04

WF #	Date	Title	Authors
159	2/25/91	Numerical simulations of beam break up (BBU) effects in a dielectric wake field tube	W. Gai
160	4/18/91	Another Plasma-Wake Field Experiment?	E. Chojnacki
161	6/11/91	Multipactoring in the AWA	M. Rosing
162	8/20/91	Photo-Cathode Cavity Fabrication	M. Rosing
163	10/7/91	Radiation Fields of Photocathode Electron	M. Rosing
164	1/02/92	Feasibility of a Dielectric Loaded rf Gun Cavity	J. Simpson
165	1/2/92	Casualty and Space Charge	J. Norem
166	3/26/92	High Power Tests of the Gun Cavity	C. Ho, E. Chojnacki R. Konecny, J. Power
167	3/30/92	Comment on the CLIC Note "Beam Leading of RF-Gun by Dark Current"	C. Ho
168	7/27/92	Self Consistent Theory of Charged Particle Motion and Radiation	M. Rosing
169	7/27/92	Computer Modeling of Cherenkov Wakefield Accelerator Structures	P. Schoessow
170	9/30/92	Generic Solutions for Two Region Cylindrical Geometry	M. Rosing
171	2/19/93	Conceptual Outline for Wakefield Diagnostic	M. Rosing
172	9/23/93	Propagation of Short Electron Pulses in Underdense Plasmas	N. Barov, J. Rosenzweig
173	12/93	Parameter Study for a Set-Up Dielectric Wakefield Accelerator Experiment at the AWA	W. Gai
174	9/94	Externally Powered Dielectric Loaded Wave Guides as Accelerating Structures	J. Simpson
175	11/94	Experimental Investigations of Wake Waves in the Waveguide with Artificial Anisotropic Dielectric and in the Train of Cavities (Proposal)	E. Laziev
176	11/94	Numerical Simulations of Intense Charged Particle Beam Propagation in a Dielectric Wake Field Accelerator	W. Gai
177	07/95	An Inverse Cherenkov Accelerator Using a Dielectric Channelled Waveguide	W. Gai, J. Simpson
178		***** NOT USED *****	
179		***** NOT USED *****	

Updated 10/28/04

WF #	Date	Title	Authors
180	05/98	Design of a Coherent Multimoded Dielectric Wakefield Accelerator	J. Power and W. Gai
181	07/98	Resonant Excitation of High Gradient Plasma Wakefield Acceleration by a Train of Micron Sized Pulses	W. Gai
183	04/99	RF Photoinjector Based Two Beam Accelerator Research Plan at Argonne National Laboratory	W. Gai
184	06/99	Summary of June 2 nd Step-Up Transformer Experiment Run	W. Gai
185	08/99	Dispersion Curves of the Dielectric Tube	X. Sun & P. Zou
186	09/30/99	Calculation of PETs Using Dielectrics for CLIC Type TBA Applications	W. Gai
187	10/1/99	Transformer Ratio Enhancement Using a Ramped Bunch Train in a collinear Dielectric Wakefield Accelerator	J. G. Power, W. Gai
188	10/20/99	Q Calculation for Dielectric Loaded SW Cavity in TM-01p Mode	J. Power
189	11/02/99	The Dispersion Relation and Quality Factor of TM _{01m} Mode in Standing Wave Dielectric Structure	X. Sun
190	1/06/00	Construction and Bench Testing of a Prototype of 11.4GHz Externally Powered Dielectric Loaded Traveling-Wave Accelerating Structure	P. Zou, X. Sun, R. Konecny, M. Conde W. Gai, T. Wong
191	1/12/00	Vacuum System Testing for X-band Dielectric-loaded Accelerator Structure	X. Sun, M. Conde, P. Zou, W. Gai
192	1/12/00	Roadmap to Attain 100 MV/m Gradients and 100 MeV Total Energy Gain in Wakefield Acceleration Using the Current AWA Facility	W. Gai & P. Schoessow
193	2/15/00	Measurement of Q for X-Band Dielectric-Loaded Standing-Wave Accelerating Structure	P. Zou, X. Sun W. Gai, and T. Wong
194	3/07/00	Design of an RF Power Extraction Device for the CLIC Test Facility	W. Gai, P. Schoessow
195	1/21/00	Effect of Temperature and Air in RF Cavities	M. E. Conde
196	4/12/00	The Longitudinal and Transverse Wakefields in a Thin Dielectric Disk Structure	W. Gai, X. Sun, P. Zou
197	4/17/00	Estimate of the Wakefield Generated with the Beam from the New AWA Gun	W. Gai
198	6/00	A Modified Laser Multi-Splitter for Generation of a Ramped Pulse Train	J. G. Power
199	6/23/00	A High Resolution Wakefield Measurement System for the ETF	W. Gai, P. Schoessow
200	10/12/00	6 MeV X-band On-axis Standing Wave Linear Accelerator	X. Sun

Updated 10/28/04

WF #	Date	Title	Authors
201	10/25/00	Calculation of AWA Drive Beam Parameters at Low Charge	X. Sun
202	1/10/01	Calculations of Dielectric Loaded Traveling-Wave Periodic Structure Properties & Thomas Wong (IIT)	P. Zou, L. Xiao X. Sun, W. Gai (ANL)
203	1/10/01	The Design of a 13.625 GHz Structure Used for the Transformer Ratio Enhancement Experiments	X. Sun, W. Gai
204	3/27/01	A Novel Approach for Wakefield Measurements at the ETF	J. Simpson
205	5/29/02	Field Pattern on the Window between WR90 Waveguide	W. Liu
206	7/29/02	On the Design of Dielectric taper section for Epislone=20	W. Liu
207	7/30/02	On the choosing of the sample points for determine the External Q and Resonant Frequency of wage guide loaded cavities	W. Liu
208	8/12/02	On the Design of Coupling Scheme for Dielectric loaded standing wave Acceleration Cavity	W. Liu, C. Jing, Wei Gai
209	10/02	Current Measurement on Bipolar Power Supply	S. Yusof
210	11/02	EM Design of Coaxial Cable to Circular waveguide TM01 adaptor	W. Liu, W. Gai
211	1/03/03	The Effects of Machine Errors in Dielectric Loaded Accelerating Structure	W. Liu, C. Jing, R. Konecny W. Gai
212	1/03	PARMELA simulations of Electron Beam from the AWA gun with 1 nC charge	H. Wang, W. Gai
213	2/5/03	A Method to Propagate Beams of Unequal Charges through the same Lattice	J. Power
214	1/17/03	A Matlab Solution of the 1D, 2D, and 3D Beam Envelope Equations	J. Power
215	4/03	Multisplitter Calculator	J. Power
216	4/29/03	Wakefield Measurements Using Low Energy Beams	J. Simpson
217	5/30/03	On the relation between image resolution and the estimated σ of a Gaussian like spot	W. Liu and J. Power
218	8/15/03	Study of Bunch Length Measurement at Argonne Wakefield Accelerator	G. Betzel (NIU)
219	1/24/04	Measurements of High Brightness Electro Beam	H. Wang, J. Power, W. Liu, W. Gai,
220	7/04	Basic Accelerator Related rf Bench Test	C. Jing
221	8/04	Beam Energy Compensation of a Bunch Train	H. Wang and W. Liu

Updated 10/28/04

WF # Date Title

Authors

222	8/12/04	Group Velocity Effect on Wakefield Calculation	C. Jing
223	10/04	Suppression of Secondary Electrons in a Dielectric Loaded Accelerating Structure	J. Simpson

